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LXIII.—ASIATIC *TORTRICIDÆ*.

By the Rt. Hon. LORD WALSLINGHAM, M.A., LL.D., F.R.S.

[Continued from p. 469.]

ADOXOPHYES, Meyr.

ADOXOPHYES, Meyr. Pr. Lin. Soc. N.S.W. VI. 429 (1881): Tr. N.Z.
Inst. XV. 39-40 (1883).

749 (5). *Adoxophyes privatana*, Wkr.

n. syn. = *cyrtosema*, Meyr.

Dichelia privatana, Wkr. Cat. Lp. Ins. B. M. XXVIII. 320 (1863)¹.
Adoxophyes cyrtosema, Meyr. Tr. Ent. Soc. Lond. 1886, 276². *Dichelia*
privatana, Swinh. & Cotes, Cat. Moths Ind. 697. No. 4752 (1889)³;
Swinh. Tr. Ent. Soc. Lond. 1890, 294⁴.

Hab. JAPAN—HONDO—Fushiki, VII. 1887 (*Leech*);
KIVSIU—Nagasaki, VI. 1886 (*Leech*). COREA—Gensan,
VI. 1886 (*Leech*). CHINA—Skip-y-Shan. ASSAM—Mar-
gherita (*Doherty*, 1889); Kohima (Naga Hills), 4700 feet,
VI. 1889 (*Doherty*); Golaghat (Naga Hills) (*Doherty*, 1890).
MADRAS—Ganjam, X. 1882 (*Minchin*). CEYLON—Para-
deniya (*Thwaites*). BURMAH—†Moulmein (=†*Hindostan*)⁵.
S.W. SUMATRA—Liwa, 3000-4500 feet, VII.-VIII. 1890
(*Doherty*); Padang Rengas (*Doherty*, 1891). S.E. BORNEO
—Riam Kiwa, 500-1000 feet (*Doherty*, 1891). S. CELEBES

—Macassar, 500 feet (*Doherty*, 1891). AMBOYNA (*Doherty*, 1892). BATIAN (*Doherty*, 1892). TENIMBER (*Doherty*, 1892). TERNATE (*Doherty*, 1892). TALAUT (*Doherty*, 1892). FIJI². TONGA².

749 (6). *Adoxophyes fasciata*, sp. n.

Antennæ cinereous, dotted with brownish fuscous above. *Palpi*, *head*, and *thorax* pale reddish brown. *Fore wings* pale reddish brown, with three transverse oblique darker red-brown fasciæ having inconspicuous transverse waved lines of whitish ochreous between them; the first fascia, from the middle of the lower edge of the costal fold to the dorsum at one-third, is sometimes interrupted on the fold, the space between it and the base of the wing is also spotted or reticulated with red-brown; the second fascia, from the outer end of the costal fold to the dorsum before the tornus, is of approximately equal width throughout, and projects slightly inwards where it crosses the fold; the third fascia, from the outer third of the costa, dying out before the lower half of the termen; there is sometimes a short half-fascia rising from the tornus and bent back towards the middle of the central fascia; about the apex are some slender streaks of the darker shade of reddish brown; cilia whitish ochreous, touched with pale reddish brown. (In the female, which is usually larger than the male, the transverse fasciæ are frequently obliterated, but the wings have a somewhat more reticulated appearance on their outer half and in some specimens the ground-colour is darker, inclining to tawny.) *Exp. al.* ♂ 15–16, ♀ 15–21 mm. *Hind wings* shining pale rosy cinereous; cilia shining whitish cinereous. *Abdomen* greyish, anal tuft inclining to ochreous. *Legs* pale whitish ochreous.

Type, ♂ (70052); ♀ (70053) Mus. Wlsm.

Hub. JAPAN (*Pryer*, 1886)—HONDO—Yokohama (*Manley*, 1888); KIVSIU (*Lecch*). KASHMIR—Scinde Valley, 7000 feet, VI. 1887 (*Lecch*). Twelve specimens.

CAPUA, Stph.

= *BATODES*, Gn.

Capua menciiana, Wkr.

Pandemis menciiana, Wkr. Cat. Lp. Ins. B. M. XXVIII. 310 (1863)¹.

Hab. JAPAN (*Pryer*, 1886)—HONDO—Gity (*Pryer*, 1886); Yokohama (*Manley*, 1888); KIVSIU—Nagasaki, V.–VI. 1886 (*Lecch*). SHANGHAI¹. SIKKIM, 4700 feet, I. 1889;

X. 1889 (Möller). KHASIAS—Cherrapunji (Nat. Coll. 1894). ASSAM—Golaghat (Naga Hills) (Doherty, 1892). S.E. BORNEO—Riam Kiwa, 500–1000 feet (Doherty, 1891); Pulo Lant Id. (Doherty, 1891). S. CELEBES—Macassar, 500 feet (Doherty, 1891). TIMUR (Portuguese) (Doherty, 1892). BATIAN (Doherty, 1892).

EPAGOGÆ, Hb.

= *DICHELIA*, Gn.

755. *Epagoge Grotiana*, F.

Tortrix (*Dichelia*) *Grotiana*, Stgr. & Wk. Cat. Lp. Eur. 239. No. 756 (1871).

Hab. EUROPE. JAPAN (Pryer, 1886). COREA—Fusan, 24 VI. 1886 (Leech). CHINA—Chang Yang, 4000–6000 feet (Pratt, 1886).

756. *Epagoge gnomana*, Cl.

Dichelia gnomana, Stgr. & Wk. Cat. Lp. Eur. 239. No. 756 (1871).

EUROPE. ASIATIC TURKEY—HALEB—Shar Devesy (Nat. Coll. 1893).

756 (1). *Epagoge retractana*, Wkr.

Dichelia retractana, Wkr. Cat. Lp. Ins. B. M. XXVIII. 322–3 (1863)¹; Meyr. Pr. Lin. Soc. N.S.W. VI. 474–5, 703 (1881)²; Wlsm. Pr. Z. Soc. Lond. 1885, 881 (1886)³; Moore, Lp. Ceyl. III. 492–3, Pl. 208. 11 (1887)⁴; Swinh. & Cotes, Cat. Moths Ind. 697. No. 4753 (1889)⁵.

Hab. N.E. CHINA—Ningpo, IV. ; VII. 1886 (Leech). KASHMIR—Goorais Valley, 7000 feet, VIII. 1887 (Leech). PUNJAB—Dharmasala (Hocking). SIKKIM—Tonglo, 10,000 feet, VII. 1886 (Flues). ASSAM—Margherita (Doherty, 1889); Golaghat (Naga Hills) (Doherty, 1890); Kohima (Naga Hills), 4700 feet, VI. 1889 (Doherty); Mao (N. Manipur), 5000–7000 feet, VIII. 1889 (Doherty). BOMBAY, X. 1888 (Swinhoe). S. INDIA—Bangalore, X. 1888 (Minchin). CEYLON⁶ (=† *Australia*¹, Wlsm.)—Peradeniya (Thwaites); Pundaloya, 4000 feet, II., IV. 1890 (Green); Dikoya (Green, 1890); Nawalapitiya, 2500 feet (Pole, 1890). W. SUMATRA—Padang Rengas (Doherty, 1891).

Walker recorded this species from Australia, but the register-number of his type is "52/52" = Ceylon (*Templeton*).

756 (2). *Epagoge angustilineata*, sp. n.

Antennæ fawn-ochreous, spotted above with fuscous. *Palpi* porrect, reaching about the length of the head beyond it, terminal joint somewhat concealed; pale fawn-brown. *Head* and *thorax* pale fawn-brown. *Fore wings* elongate, somewhat ovate; costa rounded, apex rounded, termen oblique, not impressed, tornus rounded; pale fawn-brown with a slight tinge of reddish grey, much reticulated with brown and reddish grey; a greyish fuscous spot on the costa at a little beyond one-third gives out a reddish brown line running obliquely to the dorsum at two-thirds of the wing-length; at two-thirds from the base on the costa a second oblique line runs to the termen above the tornus, a small space on the costa beyond it is tinged with greyish fuscous; before and between these oblique lines, as well as on the apical portion of the wing, are numerous reticulations of a similar colour, those on the costa inclining to greyish fuscous; cilia pale fawn, a reddish grey line running throughout them. *Exp. al.* 16 mm. *Hind wings* brownish grey; cilia pale cinereous, a slender dark shade running through them near their base. *Abdomen* [missing]. *Legs* whitish cinereous, hind tarsal joints faintly spotted.

Type, ♂ (60179); ♀ (60050) Mus. Wlsm.

Hab. JAPAN—KITSU—Satsuma, V. 1886 (*Leech*); Nagasaki, V.-VI. 1886 (*Leech*). Five specimens.

756 (3). *Epagoge minuta*, sp. n.

Antennæ pale ochreous. *Palpi* projecting more than the length of the head beyond it, slightly depressed and pointed; white, touched with brownish ochreous at the sides. *Head* white. *Thorax* white, shaded with brownish ochreous. *Fore wings* silvery white, much clouded with brownish ochreous; from a small dark spot near the base of the dorsum proceeds obliquely upwards and outwards a brownish ochreous streak, blending with a pale brownish ochreous basal shade; beyond it is a silvery white dorsal patch reaching to beyond the middle of the dorsum; a corresponding smaller silvery white costal patch above it; beyond this costal patch halfway to the apex is an elongate, triangular, silvery white oblique streak pointing to above the middle of the termen; the whole apical portion of the wing is shaded with brownish ochreous; there is also a small greyish fuscous spot at the end of the cell and some greyish fuscous scaling along the lower half of the termen; cilia white, a slender broken greyish fuscous line

running through them near their base, their tips ochreous at the apex and on the middle of the margin, but greyish fuscous at the tornus. *Exp. al.* 11·5 mm. *Hind wings* white, apex shaded with greyish fuscous; cilia shining white, with a slender pale greyish fuscous line running through them near their base on the outer half of the margin. *Abdomen* pale greyish fuscous. *Legs* white.

Type, ♂ (70115) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886). Five specimens.

756 (4). *Epagoge* (?) *calvicaput*, sp. n.

Antennæ very short and stout, cylindrical; cinereous. *Palpi* rather conical, extending more than the length of the head beyond it; pure white. *Head* pure white. *Fore wings* dull reddish brown, mottled with pale cinereous on the basal third; with two costal spots at the base and one dorsal near the base, shining pale metallic steel-grey; immediately beyond the basal third a fasciaform band of three elongate pale shining steel-grey spots crosses the wing; on the apical third are two similar oblique costal spots, and near the tornus a group of three similar spots, two adjacent to the margin and one within it; these are surrounded by a shading of black scales; along the termen from the apex to above the tornus is a chain of connected very pale rosy steel-grey metallic spots; cilia pale cinereous, brownish ochreous along their base. *Exp. al.* 11 mm. *Hind wings* greyish fuscous; cilia pale cinereous. *Abdomen* greyish fuscous.

Type, ♀ (70432) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886). Unique.

I place this in the genus *Epagoge*, having regard to its neururation; but the single specimen before me, although evidently distinct from any known species, has been somewhat injured, and I cannot be certain that it is a true *Epagoge*.

PHALONIA, Hb.

811 (1). *Phalonia respirantana*, Stgr.

Cochylis respirantana, Stgr. Hor. Soc. Ent. Ross. XV. 246 (1879)¹;
Rag. Ent. Mo. Mag. XVII. 232 (1881)²; Ann. Soc. Ent. Fr. LXIII.
191 (1894)³.

Hab. PORTUGAL—Silves, 16 V.² ANDALUSIA—Chiclana². ASIATIC TURKEY—Sivas—Amasia, V., VII.¹;
HALEB—Shar Devesy (*Native Coll.* 1893).

855. *Phalonia badiana*, Hb.*Cochylis badiana*, Stgr. & Wk. Cat. Lp. Eur. 244. No. 855 (1871).*Hab.* EUROPE. JAPAN (Pryer, 1886).885. *Phalonia ostrinana*, Gn.*Cochylis ostrinana*, Stgr. & Wk. Cat. Lp. Eur. 245. No. 885 (1871).*Cochylis purpuratana*, Stgr. & Wk. Cat. Lp. Eur. 245. No. 887 (1871).*Hab.* EUROPE. ASIATIC TURKEY—*HALEB*—Shar Devesy (Native Coll. 1893).886. *Phalonia roseofasciana*, Mn.*Cochylis roseofasciana*, Stgr. & Wk. Cat. Lp. Eur. 245. No. 886 (1871).*Hab.* EUROPE. ASIATIC TURKEY—*HALEB*—Shar Devesy (Native Coll. 1893).899. *Phalonia hybridella*, Hb.*Cochylis hybridella*, Stgr. & Wk. Cat. Lp. Eur. 245. No. 899 (1871).*Hab.* EUROPE. ASIATIC TURKEY—*HALEB*—Shar Devesy, 8 VI. 1890 (Native Coll.). INDIA—*PUNJAB*—Dharmasala (Hocking).899 (1). *Phalonia centaureana*, Stgr.*Cochylis centaureana*, Stgr. Hor. Soc. Ent. Ross. XV. 247-8 (1879)¹.*Hab.* S.E. RUSSIA—Sarepta, 15 VIII.¹ TURKEY—Macedonia¹. ASIATIC TURKEY—*SIVAS*—Kerasdere, V.-VII.¹ Larva *Centaurea divergens*¹: *HALEB*—Shar Devesy (Native Coll. 1893).

CHLIDONIA, Hb.

850 (1). *Chlidonia excellentana*, Chr.*Conchylis excellentana*, Chr. Bull. Soc. Imp. Nat. Mosc. LVI. 74-5. No. 107 (1881)¹: sep. 162-3 (1882)¹.*Hab.* AMUR—Raddefka¹; Wladiwostok¹, VI.¹ JAPAN—Yesso (Pryer, 1882).852. *Chlidonia Hartmanniana*, Cl.*Cochylis Hartmanniana*, Stgr. & Wk. Cat. Lp. Eur. 244. No. 852 (1871).*Hab.* EUROPE. ASIATIC TURKEY—*HALEB*—Shar Devesy, 18 VI. 1890 (Native Coll.).

831 (1). *Chlidonia jacularana*, Snell.

Conchylis jacularana, Snell. Tijds. v. Ent. XXVI. 195-6, Pl. XI. 8, 8 a (1883)¹.

Hab. E. SIBERIA — Suifu¹. JAPAN — YESSO (Pryer, 1882). HONDO—Tsuruga, VII. 1886 (Leech).

PHTHEOCHROA, Stph.

Phtheochroa (?) *albiscutellum*, sp. n.

Antennæ simple, or very slightly ciliate towards apex; whitish cinereous, basal joint cream-white. *Palpi* and *head* cream-white. *Thorax* cream-white; tegulæ with a black spot at their base. *Fore wings* cream-white; with a short basal patch of mixed black, cream-white, olive-brown, and some ferruginous scales, the black being arranged in two or three costal spots, with one above the fold and one beneath it; beyond the basal patch, on the costa, are two olive-brown quadrate spots containing some blackish dots, and between and below these two, but not touching them, is the apex of a transverse band arising from the middle of the dorsum and consisting of numerous tufts of raised steel-grey scales, margined outwardly with black, the whole fading into pale olive-brown before the dorsum, with which it is connected by three blackish marginal dots, forming part of a more complete dorsal series; on the apical fourth of the wing are two very faint olive-ochreous bands, with silvery white lines between and around them, containing one or two tufts of mixed shining white and silvery grey scales; these are separated from the apex, first by a narrow band of shining white, and then by a streak of ferruginous brown mixed with blackish scales which crosses the wing from before the apex to the middle of the termen; beyond it the apex and termen are olive-brown shaded with greyish fuscous; cilia olive-ochreous, touched with greyish fuscous towards their apex. *Exp. al.* 21 mm. *Hind wings* pale brownish; cilia whitish, with a slender pale brownish shade along their base. *Abdomen* pale brownish. *Legs* cream-white; hind tarsal joints spotted above with pale brown.

Type, ♀ (40522) Mus. Wlsm.

Hab. JAPAN (Pryer, 1886). Six specimens.

In the hind wings this species differs from *rugosana*, Hb., in having veins 3 and 4 separated at their origin by a very small space.

CLYSIA, Hb.

825. *Clysia ambiguella*, Hb.

Cochylis ambiguella, Stgr. & Wk. Cat. Lp. Eur. 243. No. 825 (1871).

Hab. EUROPE. JAPAN (*Pryer*, 1886). ASSAM—Cherrapunji, VIII. 1894 (*Native Coll.*); Mao (N. Manipur), 5000–7000 feet, VIII. 1889 (*Doherty*); Golaghat (Naga Hills) (*Doherty*, 1890). PEGU—Thandsung (Karen Hills), 4000 feet (*Doherty*, 1890). W. SUMATRA—Padang Rengas, low country (*Doherty*, 1891).

PHARMACIS, Hb.

= *EXXANTHIS*, Hb., = *XANTHOSSETIA*, Stph.

795 (1). *Pharmacis dives*, Btl.

Conchylis dives, Btl. Ill. Typ. Lp. Het. B. M. II. 61–2, Pl. XL. 7 (1878)¹.

Hab. JAPAN. HONDO — Yokohama¹. AMUR (*Stgr.*). E. CHINA—Foochou, IV. 1886 (*Leech*).

800. *Pharmacis defectana*, Ld.

Cochylis defectana, Stgr. & Wk. Cat. Lp. Eur. 242. No. 800 (1871).

Hab. TRANSCAUCASIA. ASIATIC TURKEY—HALEB—Shar Devesy (*Native Coll.* 1893).

800 (1). *Pharmacis innotatana*, Wrn.

Xanthosetia innotatana, Wrn. Pr. Z. Soc. Lond. 1888, 337¹.

Xanthosetia innotana, Swinh. & Cotes, Cat. Moths Ind. 697. No. 4754 (1889)².

Hab. PUNJAB—Kala Pani, V.¹ KASHMIR—Dras Ladak, 7000 feet, 20 VI. 1887 (*Leech*).

827. *Pharmacis straminea*, Hw.

Cochylis straminea, Stgr. & Wk. Cat. Lp. Eur. 243. No. 827 (1871)¹.

Hab. EUROPE. ARMENIA¹. PALESTINE (*Tristram*).

841 (6). *Pharmacis palpana*, Rag.

Conchylis palpana, Rag. Ann. Soc. Ent. Fr. LXIII. (1894) 194–5. No. 841 g (1894)¹.

Hab. ASIATIC TURKEY—ADANA—Hadjin¹; HALEB—Shar Devesy, 26–27 V. 1890 (*Native Coll.*).

In this species veins 6 and 7 of the hind wings are not actually stalked; they run close together, and are almost coincident for one-third their length.

844. *Pharmacis pallorana*, Ld.

Cochylis pallorana, Stgr. & Wk. Cat. Lp. Eur. 244. No. 844 (1871).

Hab. TRANSCAUCASIA. ASIATIC TURKEY—HALEB—Shar Devesy (*Native Coll.* 1893).

846 (1). *Pharmacis apicana*, sp. n.

Antennæ (♂) strongly biciliate. *Palpi* porrected more than the length of the head beyond it, terminal joint somewhat exposed; whitish ochreous. *Head* whitish ochreous. *Thorax* whitish ochreous, fading to white posteriorly, tegulæ slightly tinged with brown posteriorly. *Fore wings* whitish ochreous, with wavy cross-lines and streaks of shining straw-white; a narrow costal shade from the base to beyond the middle is dark umber-brown, edged with ferruginous and crossed by lines of shining pale steel-grey; a triangular oblique dorsal patch before the middle, of mixed umber-brown and ferruginous, with some shining pale steel-grey intermixed; a small blackish spot at the end of the cell; the termen is broadly dark umber-brown, mixed with ferruginous, with wavy lines and spots of pale steel-grey; cilia greyish fuscous, with a few pale ochreous scales running through them. *Exp. al.* 20-22 mm. *Hind wings* and cilia brownish cinereous. *Abdomen* brownish cinereous. *Legs* brownish cinereous; hind tarsal joints with some paler spots.

Type, ♂ (70502); ♀ (70505) Mus. Wlsm.

Hab. JAPAN (*Pryer*, 1886)—Yesso—Hakodate, VIII. 1886 (*Leech*). Seven specimens.

HYSTEROSIA, Stph.

707. *Hysterosia inopiana*, Hw.

Tortrix (*Idiographis*) *inopiana*, Stgr. & Wk. Cat. Lp. Eur. 236. No. 707 (1871)¹.

Idiographis inopiana, Fern. Tr. Am. Ent. Soc. X. 23. No. 119 (1882)²; Mrtf. Can. Ent. XXIII. 168 (1891)³.

Hab. EUROPE¹. JAPAN (*Pryer*, 1886)—Hondo—Fushiki, VII. 1887 (*Leech*). CANADA³. UNITED STATES—Maine²; New York²; California².

111 (1). CARPOSINA, H.-S.

912 (1). *Carposina berberidella*, H.-S.

Carposina berberidella, Stgr. & Wk. Cat. Lp. Eur. 304. No. 2186 (1871).

Hab. EUROPE. ASIATIC TURKEY—*HALEB*—Shar Devesy (Native Coll. 1890).

[To be continued.]

LXIV.—*On the Squirrels of the Ratufa (Sciurus) bicolor Group.* By J. LEWIS BONHOTE.

IN writing another paper dealing with various subspecies of squirrels, I should like to make a few remarks on what appear to me the advantages and necessity of recognizing these subspecific differences.

In former days, when a few skins roughly labelled and undated were the only material with which the systematist had to work, he was of necessity compelled to place under one name the various nearly allied forms which came into his hands; many of them had been described by the collector, who on getting a specimen he had not before seen, straightway described it, having no means at hand of ascertaining whether it had been previously named or not, and possibly not realizing the confusion he was storing up for the workers of the next generation. Gradually, then, as these types accumulated in large museums and were compared with each other—isolated specimens from isolated localities—the first obvious inference was that they all belonged to one species, and under one name they were accordingly placed, forms showing the most striking differences being allowed to rank as separate species. Of late years, however, large series carefully collected and with full data have been received, from which we are able to see that many of these old types referred to above are typical examples of well-defined races constant to themselves and the localities from which they come. To call these races species is misleading, as their points of difference are not sufficiently great for specific characters, and most of them would probably, if placed under conditions identical with those of another race, lose in a few generations their own